NATURAL RESOURCES - COASTAL RESOURCES

Town of Eastham Goals and Performance Standards

The Cape Cod Commission through its Regional Policy Plan for Barnstable County, has established overall planning goals and minimum performance standards for Coastal Resources. Eastham's goals and minimum performance standards are consistent with the Regional Policy Plan.

2.2.1 Goal: To protect public and traditional maritime interests in the coast and rights for fishing, fowling, and navigation, to preserve and manage coastal areas so as to safeguard and perpetuate their biological, economic, historic, maritime, and aesthetic values, and to preserve, enhance, and where appropriate, expand public access to the shoreline.

Minimum Performance Standards

2.2.1.1 Development and redevelopment along the coastline shall not interfere with existing public access and traditional public rights of way to and environmentally appropriate use of the shoreline.

2.2.1.2 Public access shall be provided at all publicly funded beach-nourishment sites where such access will not impair natural resources.

Other Development Review Policies

2.2.1.3 Marine infrastructure that supports fisheries or marine transportation should be preserved and protected from conversion to private or recreational uses.

2.2.1.4 Development and redevelopment should reflect the traditional maritime character and/or architecture typical of the area and should be designed to maintain and enhance views of the shoreline from public ways, waterways, access points, and existing development.

2.2.1.5 The construction of walkways, where environmentally acceptable, should be encouraged to enhance shoreline access for the public, including people with disabilities. Such activities should not degrade undisturbed resources or contribute to adverse impacts to habitat, aesthetics, or storm damage prevention.

2.2.1.6 If an existing water-dependent facility is within 250 feet of the mean high water line or shoreward of the first public way, whichever is less, such use should not be changed to a non-water-dependent facility unless an overriding public benefit is provided to accommodate for the loss of the water-dependent use.

2.2.1.7 Development or redevelopment of water-dependent facilities should provide coastal access benefits to the general public. Such access should minimize interference with the water-dependent use.

2.2.1.8 Coastal engineering structures should be designed so as to allow the public to pass along the shore (either above or below the structure) in the exercise of its public trust rights to fishing, fowling, and navigation.

2.2.2 Goal: To limit development in areas subject to coastal storm flow, particularly high-hazard areas, in order to minimize human casualties and property or environmental damage resulting from storms, flooding, erosion, and relative sea-level rise.

Minimum Performance Standards

2.2.2.1 Except as specified in Minimum Performance Standard 2.2.2.5, no development or redevelopment shall be permitted within FEMA flood V-zones. Existing structures may be reconstructed or renovated provided there is no increase in floor area or intensity of use. As an exception, where there is no feasible alternative, water-dependent structures and uses and maintenance of marine infrastructure may be permitted subject to the approval of all permitting authorities.

2.2.2.2 In order to accommodate possible relative sea-level rise and possible increased storm intensity, ensure human health and safety, and protect the integrity of coastal landforms and natural resources, all new buildings, including replacements, or substantial improvements to existing structures within FEMA A-zones shall be designed to accommodate the documented relative sea-level rise rate in Massachusetts of at least one foot per 100 years, except as provided in Minimum Performance Standard 2.2.2.13, and in V-zones shall be designed to accommodate a relative sea-level rise rate of two feet per 100 years.

2.2.2.3 Except as specified in Minimum Performance Standard 2.2.2.5, no new development or redevelopment shall be permitted on barrier beaches or coastal dunes as defined by the Wetlands Protection Act and associated regulations and policies. Existing structures may be reconstructed or renovated, provided there is no increase in floor area, footprint, or intensity of use, or conversion from seasonal to year-round use.

A. If the reconstruction/renovation is greater than 50% of the replacement value of a structure and is located within a V-zone, the lowest horizontal structural member shall be elevated at least two feet above the 100-year flood elevation. If the structure is located in the A-zone, the lowest floor shall be elevated at least one foot above the 100-year flood elevation, except as provided in Minimum Performance Standard 2.2.2.13. On a barrier beach or coastal dune and in either the V- or A-zone, the structure shall be on open pilings to allow for storm flowage and beach and dune migration.

B. If the structure is on a barrier beach or dune and is outside the 100-year coastal floodplain and is proposed to be reconstructed/renovated greater than 50% of its replacement value before reconstruction and renovation, it shall be elevated at least two feet above grade on open pilings to allow dune migration.

C. Water-dependent public recreational facilities and marine infrastructure in these locations may be developed or renovated in accordance with Minimum Performance Standard 2.2.2.2 provided that it can be demonstrated that the proposed development will not compromise the integrity of coastal resources or contribute to the cumulative loss of public access to the coast or fish or shellfish habitat and preserves the aesthetic quality of the area in accordance with Minimum Performance Standard 2.2.1.3.

2.2.2.4 No new non-water-dependent development shall be permitted within 100 feet of the top of a coastal bank, dune crest, or beach. Redevelopment shall be designed to have no adverse effect on the height, stability, or the use of the bank or dune as a natural sediment source. In areas where banks or dunes are eroding, the setback for all new buildings and septic systems to the top of the coastal bank or dune crest shall be at least 30 times the average annual erosion rate of the bank or dune or 100 feet, whichever is greater. The annual rate of erosion shall be determined by averaging the erosion over the previous 30-year period at a minimum. In instances where shoreline erosion rates are indicative of bank/dune erosion rates, MCZM shoreline change maps may be used in determining the setback.

2.2.2.5 Where fire, storm, or similar disaster has caused damage to or loss of buildings in FEMA A- and V-zones, on barrier beaches, coastal banks, or coastal dunes of greater than 50% of their replacement value, all reconstruction shall be in compliance with current applicable regulations and shall be designed in accordance with Minimum Performance Standards 2.1.1.4, 2.2.2.2, 2.2.2.4, 2.2.3.1, and 2.2.3.2. Any reconstruction shall not enlarge or expand the use of an existing structure.

2.2.2.6 Except as provided in Minimum Performance Standard 2.2.2.13, no new public infrastructure or expansion of existing infrastructure shall be made in flood hazard zones (FEMA A- and V-zones) unless it is shown that there is an overriding public benefit provided, and provided that such infrastructure will not promote new growth and development in flood hazard areas.

2.2.2.7 Where land subject to coastal storm flow serves to control floods and prevent 1storm damage, no activity shall increase the existing site elevations or the velocity of flood waters or increase flows due to a change in drainage or flowage characteristics on the subject site, adjacent properties, or any public or private way.

2.2.2.8 New development and redevelopment shall not impede the landward migration of resource areas within the 100-year floodplain, except for maintenance of existing public infrastructure. Relative sea-level rise and the landward migration of coastal resources in response to relative sea-level rise shall be incorporated into the design, construction, and location of structures and other activities proposed.

2.2.2.9 New structures, additions to existing structures, solid foundations, new or proposed expansions of roads, driveways, or parking lots, or impermeable paving of existing ways, new or proposed expansions of coastal engineering structures, and new septic systems shall be prohibited within the V-zone of a beach, dune, barrier beach, or coastal

bank. Redevelopment of marine infrastructure shall include a monitoring and renourishment plan to replicate the form and function of pre-existing features to the greatest extent practicable.

2.2.2.10 Notwithstanding Minimum Performance Standards 2.2.2.6, 2.2.2.7, 2.2.2.8, 2.2.2.9, and 2.2.3.13, the following activities may be permitted provided the applicant demonstrates that best available measures are utilized to minimize adverse impacts on all critical characteristics of land subject to coastal storm flowage, and provided that all other performance standards for underlying resource areas are met: beach, dune, and bank nourishment and non-structural restoration projects, including temporary fencing and other devices composed of natural and biodegradable material to facilitate dune development and plantings compatible with natural vegetative cover; appropriately designed pedestrian walkways and elevated decks with appropriate orientation, height, and spacing between planks to allow sufficient sunlight penetration; maintenance and use of public boat launching facilities; maintenance required to preserve the aesthetics or structural integrity of marine infrastructure; projects that will restore, rehabilitate, or create salt marsh or freshwater wetlands; projects that are approved in writing or conducted by the Division of Marine Fisheries and that are specifically intended to increase the productivity of land containing shellfish, including appropriately sited and managed shellfish aquaculture projects, or to maintain or enhance marine fisheries, and projects that are approved in writing or conducted by the Division of Fisheries and Wildlife that are specifically intended to enhance or increase wildlife habitat.

2.2.2.11 Monitoring and maintenance plans shall be required of all projects proposing to place dredged material on public or private beaches for renourishment of eroding features. Vegetative stabilization shall be designed and maintained to ensure the longevity of the renourishment project, and shall be implemented as a component of the maintenance plan. The density of stabilizing vegetation may be reduced to preserve characteristics of nest sites and actual habitat of threatened and endangered species such as shorebirds and the diamondback terrapin.

2.2.2.12 Wherever feasible, dredged material shall be used for nourishment on public beaches subject to erosion. Such material shall be clean and compatible with existing strata. Where no feasible public site exists, dredge material may be used to enhance storm damage prevention for multiple private properties, provided that public access is afforded in accordance with Minimum Performance Standard 2.2.1.2.

2.2.2.13 In order to allow alternative means of reducing flood hazard risks in areas where there are serious concerns about protecting the character of historic villages, the following shall apply in Village Growth/Activity Centers or Growth Incentive Zones located in FEMA A-zones for which a Flood Hazard Mitigation Plan has been prepared and adopted by the town and has been found by the Cape Cod Commission to be consistent with state coastal policies and regulations. Notwithstanding Minimum Performance Standards 2.1.2.5, 2.2.2.2, 2.2.2.3 A, and 2.2.2.6, the following standards shall apply to such Village Growth/Activity Centers or Growth Incentive Zones located within FEMA A-zones:

A. Development and redevelopment shall be subject to the requirements of the adopted flood Hazard Mitigation Plan and any related policies and regulations.

B. Public infrastructure and private sewage treatment facilities (PSTFs) may be constructed in FEMA A-zones (but not within a V- or an AO- zone) provided that these facilities are consistent with the Flood Hazard Mitigation Plan and the certified Local Comprehensive Plan; further provided that the infrastructure is itself flood-resistant; and provided that such infrastructure will not promote new growth and development outside such Growth/Activity Center or Growth Incentive Zone.

C. All new buildings or substantial improvements to existing structures in the FEMA A-zone shall comply with FEMA and State Building Code regulations for elevation and flood-proofing.

Other Development Review Policies

2.2.2.14 Vehicle, boat, and pedestrian traffic in critical wildlife and plant habitat areas as identified in Minimum Performance Standard 2.4.1.4 such as wetlands, dunes, shallow estuarine areas, and shorebird-breeding habitat and other sensitive resource areas should be minimized.

2.2.3 Goal: To maintain and improve coastal water quality to allow shellfishing and/or swimming in all coastal waters as appropriate, and to protect coastal ecosystems that support protected species and shellfish and finfish habitat.

Minimum Performance Standards

2.2.3.1 New mounded septic systems shall be prohibited within FEMA V-zones except to upgrade existing failed systems where such systems pose a demonstrated threat to public health, water quality, or natural resources. Structural components of failed systems shall be removed from V-zones, unless such removal would cause irreversible adverse impacts to protected resources.

2.2.3.2 No new direct, untreated stormwater discharges shall be permitted into any coastal waters or wetlands, including discharges above or below the mean high water level. Existing stormwater discharges shall be corrected through treatment and redirection in accordance with applicable Minimum Performance Standards under Goal 2.1.3.

2.2.3.3 The design and construction of stormwater management systems proposed in V-zones shall incorporate the historic rate of relative sea-level rise in Massachusetts of two feet per 100 years to the maximum extent practicable. For systems proposed in A-zones, the historic rate of relative sea-level rise in Massachusetts of one foot per 100 years shall be incorporated into National Pollution Discharge Elimination System (NPDES) Phase II Plans (where required) and individual project design and construction.

2.2.3.4 In order to avoid additive losses of shellfish habitat and minimize cumulative impacts to wetlands and public access, construction of community docks and piers, rather than separate structures serving individual lots, shall be required. In significant shellfish habitat areas, as identified and documented by the Division of Marine Fisheries and/or local shellfish officials, the construction or expansion of docks and piers shall not be permitted. Previously licensed private docks and piers more than 50% damaged or destroyed by storms may be replaced in accordance with federal, state and local regulations, except in areas identified and documented as significant shellfish habitat.

2.2.3.5 New marinas of 10 or more slips, moorings, or active landward storage berths, and expansions of existing marinas by 10 or more slips, moorings, or berths shall provide or contribute to the provision of adequate boat sewage pump-out facilities in each harbor and shall provide restrooms for their patrons. Such marinas shall also provide or contribute to provision of adequate collection facilities for solid waste and waste oil for their patrons.

2.2.3.6 Improvement dredging shall be prohibited except for when new dredging is necessary to accomplish substantial public benefit and no feasible alternative exists. Public Benefits may include enhancement of fish or shellfish habitat, improvements to the flushing capacity of nitrogen sensitive embayments.

2.2.3.7 Development shall have no significant direct or indirect adverse effects to eelgrass beds, unless there is no feasible alternative location or design for the project and the project is necessary to accomplish a public benefit.

2.2.3.8 Development and redevelopment shall be designed and constructed to minimize direct and secondary impacts to fish, shellfish, and crustaceans.

2.2.3.9 All projects proposed as maintenance dredging shall provide prior permitting authorities, permit numbers, dates of issuance and re-issuance, and documentation that clearly demonstrates the width, depth, and length of the previously permitted project.

2.2.3.10 Coastal aquaculture facilities shall be designed to have no significant adverse impacts to water quality or to the chemical composition and habitat value of marine sediment. New permanent or permanently anchored artificial structures designed to retain or support the propagation of fish or shellfish, other than marine infrastructure and other development permitted herein, shall not be permitted in the sub-tidal marine environment. Temporary structures permitted in writing by the Division of Marine Fisheries and specifically intended to increase the productivity of land containing shellfish or enhancing marine fisheries may be allowed, provided that there is no impact to public trust rights.

2.2.3.10 Undisturbed buffer areas of at least 100 feet in width surrounding coastal wetlands and/or landward of the mean high water mark of coastal water bodies shall be protected in accordance with Minimum Performance Standard 2.3.1.2.

Other Development Review Policies

2.2.3.11 Where appropriate, waterfront fueling facilities should be upgraded to ensure that best management practices are used to avoid adverse impacts to water quality.

2.2.3.12 Development and redevelopment in the marine environment should be designed to minimize subsurface noise impacts to fish and to protected species habitat.

2.2.3.13 Encourage the continuation of small scale aquaculture licenses, as well as the use of native species and good monitoring programs done cooperatively with the National Seashore to prevent negative water quality and ecological impacts from aquaculture activities.

2.2.3.14 Protect and enhance the quality and quantity of shellfish resources through habitat restoration and aquacultural techniques including the Eastham Aquaculture Technology Training Center at Hemenway Landing.

Additional Town Goals

Overall, the Town must consider the protection of its coastal resources as vital to the well being of the community. The health and well being of these resources has deteriorated in general due to miscellaneous individual actions, but the net result has been degradation. Status quo is not acceptable in terms of the environmental consequences and efforts should be maintained to improve the quality of these areas. Additional goals of the Town of Eastham with regard to coastal resources include the following:

- *Protect natural habitats in the coastal region from destruction by coastal-engineered structures.*
- *Preserve traditional rights of access to shoreline areas by the public.*
- *Manage the marine habitat of the salt marshes to prevent destruction of shellfish and finfish resources by strictly limiting the construction and utilization of new private docks and piers.*
- *Plan and implement programs to maintain waterways access for the public, e.g., boat launching areas.*
- *Protect and improve water quality in shellfish growing areas though better stormwater management and addressing other human utilization of the near shore area.*
- *Maintain and improve public beaches for the use of bathers.*

Existing Conditions

The coastal resources of Eastham are divided between Cape Cod Bay (the West Shore) and the Atlantic Ocean including Nauset Marsh and Town Cove. The Bay shoreline extends approximately 5.5 miles and is a mixture of coastal bank deposited by glacial activity, barrier beaches which form and protect extensive salt marsh systems, and coastal dunes. The Town

owns and maintains seven (7) public beach areas along this shoreline with a total parking lot capacity of some five-hundred (500) vehicles.

Table 7: Eastham Beach Parking

Beach	Parking
South Sunken Meadow	26
Cooks Brook	85
Campground	119
Thumpertown	18
Cole Road	12
First Encounter	199
Boat Meadow	10

The parking areas serve an area which totals approximately 1,500 linear feet of beach front (0.3 miles). No lifeguards are provided at these beaches due to the nature of the tidal action. Average depth of water is eight feet along the beaches at high tide, and at low water sandbars extend up to one mile offshore. Numerous private access points to the shore also exist, which are maintained by local associations of homeowners.

Two barrier beaches, located at Sunken Meadow and First Encounter beaches, have been created by sand transported by tidal action and the wind. Landward of these barrier systems are extensive salt marsh systems, which have tidal creeks. Other salt marsh systems include Boat Meadow and Rock Harbor. All of these systems have been designated as Areas of Critical Environmental Concern (ACEC). In total, they contain approximately 400 acres.

Rock Harbor is located at the southern extremity of the Town and is jointly used with the town of Orleans as a (tidal) port for recreational and commercial fishing vessels. Eastham maintains some 45 slips for dockage of boats and the Public Access Board of the Commonwealth maintains a parking area with boat launching ramp. Periodic dredging of this harbor continues on an erratic schedule. The most recent activity was completed in 1992, with the dredge spoil being deposited in several nearby shoreline locations. Future dredging will most likely require the transport of this material off site.

Billingsgate Island, scarcely visible except at low tide, is presently a mere fraction of its former self. Once an upland area which supported a community of residents, tidal action has reduced the volume of land to a shoal area. This foreshadowing of the future of the rest of the Cape forced the removal of the dwellings and people some time ago, but the resource as a productive shellfishing ground still exists. The corporate boundary of the Town extends three miles further into Cape Cod Bay and within that area lie productive grounds for the harvest of quahogs, sea clams, and bay scallops. Recreational fishing for both finfish and shellfish is common along the entire shoreline.

On the opposite side of the Town, Eastham's Back shore faces the Atlantic Ocean, which consists for the most part of high bluffs of glacial till exposed to coastal processes. Much of this sand has been transported southerly to form the Nauset Spit, a barrier beach which created and protects the Nauset Marsh system and adjacent Town Cove. The salt marsh system covers approximately 800 acres and is an extremely productive nursery area for both fin and shellfish species. Shellfishing is an ongoing activity in the marsh with both recreational and commercial activity being sustained and encouraged. The Town has developed numerous programs to supplement the natural production of shellfish species including relays, aquaculture methods to raise seed for the "wild" fishery, predator control programs and water quality monitoring.

The location of the Nauset Marsh system within the Cape Cod National Seashore boundary and its associated Seashore Zoning District F regulations establishes a level of environmental protection specifications for privately owned (fee simple) properties. These zoning specifications limit uses, expansions, alterations, repairs and disturbance of land associated with residential dwellings within the boundary. For dwellings owned by the Cape Cod National Seashore through condemnation, removal and restoration to original conditions will be completed as funding permits. Over, time this will reduce the number of structures in drainage basin contributing to the Nauset Marsh system and the footprint of area devoted to residential use. Currently, the Cape Cod National Seashore and the Town are cooperating on a project adjacent to Salt Pond Bay to remove a house and restore the surrounding area to back to its natural state. Both the Town and the Cape Cod National Seashore are stakeholders in protecting the health of the Nauset Marsh system.

Private shellfish aquaculture sites continue to operate in various areas of the marsh and cove as they have historically done. The Town is currently addressing the recent interest in aquaculture by developing and permitting larger scale "Aquaculture Development Areas". These large sites which abut Town property in Cape Cod Bay are leased to individuals. By streamlining the permitting process and providing areas not subject to upland property owners' objections, aquaculture activities will be encouraged. The EATTC provides training for potential aquaculturists as well as interested citizens and provides seed shellfish for the recreational and commercial wild fishery.

The corporate boundary of the Town divides the Town Cove from sections of Nauset Marsh. Historically, residents of each town have "enjoyed the rights to the shellfishery" as if they were residents of the other Town since the political separation of Orleans from Eastham in 1800's. Since division of resources based on political rather than biological or other scientific strategies does not make sense, the two towns have cooperated closely on all aspects of management of the water bodies in question.

The majority of Eastham's shoreline along the back shore remains undeveloped beyond the establishment of the Cape Cod National Seashore. Two beaches are maintained on the Ocean at Nauset Light and Coast Guard sites. Both facilities are operated by the Seashore and include restroom facilities as well as lifeguards. Three Town landings are maintained along the marsh and Cove, which serve as boat launching areas. Swimming is limited at these sites.

Analysis

The overwhelming majority of the shorefront in Eastham along Cape Cod Bay is eroding at various rates ranging from more than two feet per year to less than one-half foot per year. The response by property owners has been to construct structures to prevent the loss of their property with the resulting loss of active beach, "end effects" which encourage neighbors to imitate the activity, and finally a loss of sand to adequately nourish the barrier beach systems at the extremities of the town. Efforts have been made to encourage "soft" solutions to the erosion process, but much damage has been completed.

Nourishment of Town owned beach areas are a significant problem and increasing in scope. New or repaired coastal engineer structures are permitted with the stipulation that artificial nourishment shall be conducted annually by the property owner in an amount equal to what would have eroded at the site had there not been a coastal engineered structure. As the densely developed areas along the shore are converted to year-round use, or expanded to include more housing on tiny foundations, septic issues and the subsequent low level impact of foot traffic and other incidental pressure increases. Access to and use of the beachfront property is an issue of increasing concern as certain property owners is attempting to exercise their property rights to mean low water (a considerable distance) and prevent such activities as bathing, boat moorings and shellfishing in front of their property. While not excessive at the present time, these owners represent a trend, which is increasing at a regular rate.

Dredging of Rock Harbor should be conducted on a five-year basis to ensure the least amount of disruption of navigation and safety. Previous projects have been completed only when the harbor proper was not navigable at low tide, which presents a fire hazard. The dichotomy of excess sand in Rock Harbor, which needs to be removed, and the lack of beach material along the eroding shore of the Bay suggests an integrated solution. A process should be implemented whereby the amount of material needed to stabilize eroding beaches, the amount of material estimated to be available in Rock Harbor, the timing of the transfer and the cost of the project are evaluated and balanced.

Similar projects have been executed on Cape beaches with the understanding that the process is a dynamic one. The benefits of the attractive beach area are to be enjoyed by property owners as well as visitors and all who are part of the visitor economy.

There appears to be a limitless demand for services at Rock Harbor despite the fact that it is subject to tidal action. The limited number of slips cannot meet the need, but the expansion of dock facilities must be weighed together with loss of marsh and increased traffic along access roads. Town should initiate a harbor planning study, targeting Rock Harbor, to develop a framework and guidelines for use and dredging activities. Study results could serve as the baseline for developing a town-wide harbor management plan in accordance with state guidelines.

Docks and piers constructed along the shore of Town Cove presents an ongoing concern with regard to the access along the shoreline as well as effects on shellfish habitat. Issues such as

increased turbidity, loss of areas, and conflict of use are concentrated along this section of Eastham's shoreline.

All of the salt marsh systems along the west shore are currently closed to shellfishing activity due to an administrative closure order issued by the Environmental Protection Agency (EPA). Sanitary surveys of these areas have not been completed at the present time, but high coliform bacteria counts in samples suggests that these areas would not meet water quality standards. In Nauset Marsh and Town Cove, several areas are subject to "seasonal closure" or "rainfall closure" due to road runoff, which is channeled directly in shellfish growing areas. These areas are in critical need of attention.

Recent changes to the inlet of the Nauset Marsh system have demonstrated that development in some areas identified as High Hazard by the FEMA maps has been underestimated. With two inlets established for the present time, more tide waters are able to enter the system, but not necessarily exit on the low tide; thus with a series of easterly gales which drove tide waters into the marsh numerous instances of flooding have occurred. In fact the 100-year flood elevation has been achieved several times in a few years. The FEMA maps need to be reviewed in light of different barrier beach configurations. At a minimum, development in boundary areas or within hazard areas should be scrutinized.

Implementation

Recommended Town Actions

A. Designate a "working waterfront" overlay zone in the area of Collins Landing in Town Cove to ensure the preservation and expansion of traditional maritime uses. Within this zone a boatyard preservation program should be implemented. All new buildings or accessory uses constructed within this zone should directly benefit maritime related uses.

B. Confirm designated traditional rights-of-way to the shore through appropriate legal means. Efforts should continue to educate the public about shoreline issues and to attempt to resolve disputes between owners and users.

C. Restrict development or increase in use in environmentally sensitive nearshore areas and limit septic impact of development.

D. Initiate a harbor planning study, targeting Rock Harbor, to develop a framework and guidelines for use and dredging activities. Study results could serve as the baseline for developing a town-wide harbor management plan in accordance with state guidelines to implement watershed zoning to protect coastal resources and prevent use conflicts on the water.

E. Review its areas designated as Federal no discharge zones for boats to be certain they meet current Federal and State guidelines.

F. Continue to cooperate with the regional efforts to provide disposal options for marine head waste.

G. Monitor by-laws and regulations established to reduce the potential impacts to health and safety and the economy resulting from coastal storms in order to ensure necessary stringency.

H. Update its list of projects that provide or enhance coastal access and use of their shoreline. To be used in conditioning local Chapter 91, Massachusetts General Law licenses.

I. Encourage "soft" solutions (snow fencing, beach grass planting) to coastal erosion instead of engineered structures.

J. Develop a comprehensive plan to require annual beach nourishment/replenishment as a condition for permission to install, maintain or rebuild a revetment.

K. Secure easements for public ownership of tidal flats between mean high and mean low water.

L. Maintain a regular dredging schedule for Rock Harbor.

M. Explore the feasibility of using Rock Harbor dredged materials for beach nourishment projects.

N. Continue to upgrade and expand beach services, including clean, adequate handicapped-accessible toilet facilities at each beach; benches, picnic tables and trash receptacles, bicycle parking, additional planting and fencing to delineate sensitive dune areas; uniform and user friendly signage; and should investigate additional sources of funding to provide additional personnel at parking lots.

O. Implement a continuing environmental education program.

P. The volunteer corps of year-round and seasonal residents should be continued to help with beach maintenance, possibly on an "adopt a beach" program.

Q. Continue and expand the shellfish propagation and predator control efforts for both recreational and commercial uses.

R. Pursue the establishment of community rather than individual private docks in the area of Town Cove.

S. Identify and cleanup the existing point source discharges of storm water from roadways such as Route 6.

T. Target the salt marsh areas along Cape Cod Bay which are subject to administrative closure for sanitary survey and restoration/remediation programs.

See “Coastal Resources” in Implementation section.